UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,891	01/09/2002	Radu S. Jasinschi	US 010697	5704

24737 7590 01/03/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
NGUYEN-BA, HOANG-VU A	
ART UNIT	**PAPER NUMBER**
2623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/042,891	JASINSCHI ET AL.	
	Examiner	Art Unit	
	Hoang-Vu A. Nguyen-Ba	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/5/04; 10/15/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed January 9, 2002.

2. Claims 1-23 have been examined.

Priority

3. The priority date considered for this application is January 9, 2002.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed January 9, 2002.

Information Disclosure Statement

5. The Office acknowledges receipt of the Information Disclosure Statement filed October 15, 2002 and March 5, 2004. They have been placed in the application file and the information referred to therein has been considered.

Drawings

6. The drawings filed February 26, 2002 are informal. Formal drawings are required.

Specification

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

8. The specification is objected to because of the following minor informality: the "U.S. Patent No. 6,253,507" to Ahmad et al. at page 3, line 18; p. 14, line 15; and p. 24, line 7 is incorrect and should be changed to – U.S. Patent No. 6,263,507 --.

Claim Rejections – 35 USC §112

9. The following is a quotation of the second paragraph of the 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 23 is rejected under 35 U.S.C. §112 , second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "the method" recited at line 4 appears to lack proper antecedent basis. For compact prosecution purposes, the limitation is interpreted to mean – the computer program –

Claim Rejections – 35 USC § 101

11. 35 U.S.C. § 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the condition and requirements of this title.

12. Claims 18-21 are rejected under 35 U.S.C. § 101 because The claimed invention is directed to non-statutory subject matter.

The Supreme Court has ruled that to be statutory, a claimed process must either: (A) result in a physical transformation for which a practical application is either disclosed in the

specification or would have been known to a skilled artisan, or (B) be limited to a practical application which produces a useful, tangible, and concrete result.. See Diehr, 450 U.S. at 183-84, 209 USPQ at 6 (quoting Cochran v. Deener, 94 U.S. 780, 787-88 (1876)) ("A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing.... The process requires that certain things should be done with certain substances, and in certain order; but the tools to be used in doing this may be of secondary consequence."). See also Alappat, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting Diehr, 450 U.S. at 192, [209 USPQ at 10]). See also id. at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring)("unpatentability of the principle does not defeat patentability of its practical applications")(citing O'Reilly, 56 U.S. (15 How.) at 114-19).

i. "Practical Application of an Abstract Idea"

While the Supreme Court has ruled that "transformation" is relevant to a section 101 inquiry, the Court has expressly refused to hold that it is the only test for determining patent eligibility. The Federal Circuit has provided further guidance in distinguishing between the judicially-created exceptions to patentable subject matter and eligible subject matter. The focus of the inquiry is whether the claim, considered as a whole, constitutes "a practical application of an abstract idea." State Street, 149 F.3d at 1373, 47 USPQ2d at 1600. Thus, the question of whether a claim encompasses statutory subject matter should not focus on which category of subject matter a claim is directed to (e.g., process or machine), "but rather on the essential characteristics of the subject matter, in particular its practical utility." State Street, 149 F.3d at 1375, 47 USPQ2d at 1602; see also AT&T, 172 F.3d at 1360, 50 USPQ2d at 1453 (focus on section 101 inquiry is "whether the mathematical algorithm was applied in a practical manner"). Accordingly, an "abstract idea" when practically applied to a useful end is eligible for a patent. State Street, 149 F.3d at 1374, 47 USPQ2d at 1601 ("a process, machine, manufacture, or composition of matter employing a law of nature, natural phenomenon, or abstract idea is patentable subject matter even though a law of nature, natural phenomenon, or abstract idea would not, by itself, be entitled to such protection.")(emphasis added); see also Alappat, 33 F.3d at 1543, 31, USPQ2d at 1556-57 (holding that "certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, and thus that subject matter is not, in and of itself, entitled to patent protection.").

ii. "Useful, Concrete and Tangible Result"

In State Street, the Federal Circuit examined some of its prior section 101 cases, observing that the claimed inventions in those cases were each for a "practical application of an abstract idea" because the elements of the invention operated to produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. For example, the court in State Street noted that the claimed invention in Alappat "constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced 'a useful, concrete and tangible thing – the condition of a patient's heart." Id.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and

> concrete, but rather that the final result is "useful, tangible and concrete." The Federal Circuit further ruled that it is of little relevance whether a claim is directed to a machine or process for the purpose of a § 101 analysis. AT&T, 172 F.3d at 1358, 50 USPQ2d at 1451.

In this instance, it is unclear as to what the final result of the steps taken recited in claim 18 (i.e., identifying a time period of uniformity and identifying a segment of the multimedia) would be. Will the identifying steps used for forming a cumulative, inter-attribute, union of identified and single period, determined based on a dominant attribute with identified and single periods, determined based on another respective attribute, the union defining a story segment time interval having a start time and an end time (see Claim 22). Claim 18 is thus devoid of any final results that are useful, concrete, and tangible.

As a result, Claim 18 and dependent Claims 19-21 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter because these claims are not for a practical application that produces a useful, concrete and tangible result.

13. Claim 23 is drawn to functional descriptive material NOT claimed as residing on a computer-readable medium.

MPEP 2106.IV.B.1(a)(Functional Descriptive Material) states:

> "Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer."
>
> "Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized."

Claim 23, while defining a computer program for identifying segments of multimedia data of interest does not define a "computer-readable medium" and is thus non-statutory for that reason. A computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable storage medium" in order to make the claim statutory.

"In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." – MPEP 2106.IV.B.1(a).

Claim Rejections – 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejection under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-16, 18-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Zhang et al. ("Zhang"), Automatic Parsing of News Video, May 15, 1994.

Claims 1, 18 and 23

Zhang discloses at least an apparatus, a method and a computer program for *identifying segments of multimedia data of interest, the multimedia data comprising a stream of at least one of audio, video and text elements, the elements having at least one attribute with a numerical value, the attribute being indicative of the content of the element* (see at least section Introduction, 2nd ¶), *the apparatus comprising:*

an intra-attribute uniformity module for identifying a time period of uniformity, if any, during which the numerical value of the attribute of the element of the respective stream meets an attribute uniformity threshold (see at least section 2.1, 2.2.3 two last ¶s and 2.24)*; and*

a module for identifying a segment of the multimedia data corresponding to the identified time period of uniformity (see at least 2.2.3, ¶ before the last ¶).

Claims 2 and 19

Zhang further discloses *wherein the segment identifying module comprises an attribute consolidation module for consolidating pairs of identified time periods of uniformity into a single time period of uniformity that temporally comprises the pair of identified time periods of uniformity* (see at least 2.1, 3rd ¶).

Claims 3 and 20

Zhang further discloses *wherein the consolidating of a pair is based on a comparison between a time span intervening between the pair and a threshold that is based on the attribute and on a characteristic of a predefined thematic collection of data* (see at least 2.1, 3rd ¶).

Claims 4 and 21

Zhang further discloses *wherein the attribute consolidation module identifies a dominant attribute based on a comparison between a threshold and a parameter of a time period of uniformity identified by the intra-attribute uniformity module* (see at least 2.1, 3rd ¶; the dominant attribute being the changed pixel).

Claims 5 and 22

Zhang further discloses *wherein the segment identifying module further includes an inter-attribute merge module for forming a cumulative, inter-attribute, union of identified and single periods, if any, determined based on a dominant attribute with identified and single periods, if any, determined based on at least one other respective attribute, the union defining a story segment time interval having a start time and an end time, at least some cumulations in forming the union being conditional upon the existence of an intersection, at least partial, between an identified or single period being accumulated and an identified or single period already accumulated in forming the union* (see at least 2.2.3-5).

Claim 6

Zhang further discloses *wherein the inter-attribute merge module indexes the start time and end time of the story segment time interval by characteristics of content of a portion of the multimedia data that is temporally within the story segment time interval* (see at least 2.2.1, "[s]tarting and ending sequences" and 2.2.5).

Claim 7

Zhang further discloses *comprising a multimedia segment linking module for establishing a link among ones of indexed story segment time intervals that meet a segment relatedness criterion* (see at least section 4).

Claim 8

Zhang further discloses *wherein said at least one other respective attribute comprises at least two attributes, an ordering of attributes by which said cumulative, inter-attribute union is formed being determined based on comparisons between thresholds and respective parameters of a time period of uniformity identified by the intra-attribute uniformity module* (see at least 2.2.3-5).

Claim 9

Zhang further discloses *wherein the accumulations continue for multiple passes over the attributes* (see at least 2.2.4, 2nd ¶).

Claim 10

Zhang further discloses *wherein the multimedia data has a genre, and the ordering changes based on the genre of the multimedia data on a second pass and subsequent passes, if any* (see at least 2.2.5).

Claim 11

Zhang further discloses *wherein said cumulative, inter-attribute union includes identified and single periods that temporally intersect an identified or single period determined based on a dominant attribute by at least a predetermined ratio of a length of the respective identified or single period determined based on the dominant attribute* (see at least 2.2.3-5).

Claim 12

Zhang further discloses *wherein said inter-attribute merge module is configured to form an interim union of an identified or single period determined based on a first attribute with an identified or single period determined based on a second attribute, the interim union*

defining a period that is accumulated in forming the cumulative, inter-attribute union (see at least 2.2.3-5).

Claim 13

Zhang further discloses *said at least one other respective attribute comprising at least two attributes, an ordering of attributes by which said cumulative, inter-attribute union is formed being subject to revision as said stream of elements is processed by said apparatus to identify one of said segments of multimedia data of interest* (see at least 2.2.5).

Claim 14

Zhang further discloses *wherein the segment identifying module further includes an inter-attribute merge module for forming a story segment time interval that temporally defines a story segment comprising content characteristic of a portion of the stream that is located within an identified or single period determined based on a dominant attribute* (see at least 2.2.3-5 and 2.1, 3rd ¶).

Claim 15

Zhang further discloses *wherein the segment identifying module further includes an inter-attribute merge module for forming a cumulative, inter-attribute, union of identified and single periods, if any, determined based on a pre-defined, dominant attribute with identified and single periods, if any, determined based on at least one other respective attribute, the union defining a story segment time interval having a start time and an end time* (see at least 2.2.1, "[s]tarting and ending sequences," 2.2.3-5 and 2.2.5).

Claim 16

Since Claim 16 recites the features of Claims 4 and 5, the same rejections are thus applied.

Claim Rejections – 35 USC § 103

16. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not negatived by the manner in which the invention was made.

17. Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang et al. ("Zhang"), Automatic Parsing of News Video, May 15, 1994.

Claim 17

Zhang does not specifically disclose *wherein the attribute comprises a close-caption attribute, the stream includes a text element having representative frames that have the close-caption attribute, the numerical value comprising a count of a number of close-caption marker elements encountered in one or more consecutive representative frames in said identifying of a time period of uniformity.* However, Official notice is taken that it is well-known in the art to add closed-captioned text to video shots for the purpose of allowing hearing-challenged customers to follow newscast.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the automatic parsing process of news video taught by Zhang to detect closed-captioned text for the purpose discussed above.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:15 am to 5:35 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist (571) 272-.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Hoang-Antony Nguyen-Ba

December 22, 2006

ANTONY NGUYEN-BA
PRIMARY EXAMINER